IN THE CLAIMS:

None of the claims have been amended herein.

1. (Previously Presented) A method for processing semiconductor dice on a wafer comprising:

determining defects on the semiconductor dice on the wafer;

classifying each of the defects by size and location, determining and classifying comprising classifying each of the defects into one of size range populations of defects;

assigning a weight to each of the defects representing an estimated effect of each defect on die yield for the semiconductor dice;

determining an estimated die yield loss (DYL) for each semiconductor die of the semiconductor dice based on number and weight of the defect(s) on each semiconductor die of the semiconductor dice, determining the estimated DYL including calculating an estimated die yield loss having lower and upper limits;

summing all of the DYL of the semiconductor dice on the wafer to obtain a wafer yield loss (WYL);

subdividing the defects into a plurality of size range populations of defects for the semiconductor dice; and

determining a relative contribution of each size range population of defects of the plurality of the semiconductor dice to the wafer yield loss WYL.

2. (Previously Presented) The method of claim 1, wherein determining the DYL comprises calculating an estimated die yield loss having lower and upper limits of zero and 1.0, respectively.

3. (Previously Presented) The method of claim 2, wherein the lower limit comprises a representation of no yield loss attributable to the defects and the upper limit comprises a representation of fatal yield loss attributable to the defects.

4. (Previously Presented) The method of claim 1, wherein subdividing the defects into the plurality of size range populations of defects comprises subdividing the defects into a plurality of 0 to 10 size range populations.

5. (Previously Presented) A method for semiconductor dice on a wafer comprising:
determining defects on the semiconductor dice on the wafer;
classifying each of the defects by size and location, determining and classifying comprising classifying each of the defects into one of size range populations of defects;
assigning a weight to each of the defects representing an estimated effect of the defects on die yield for the semiconductor dice;
determining an estimated die yield loss (DYL) for each semiconductor die of the semiconductor dice based on number and weight of the defects on each semiconductor die of the semiconductor dice;
summing all DYL of the semiconductor dice on the wafer to obtain a wafer yield loss (WYL);
subdividing the defects into a plurality of size range populations of defects; and
determining a relative contribution of each size range population of defects of the plurality to the WYL, wherein determining the relative contribution of each size range population of defects of the plurality to the wafer yield loss comprises:
discarding data for each size range population of defects of the plurality and calculating, in turn, a drop in the WYL for combined size range populations excepting the discarded data;
summing the calculated WYL to obtain a drop sum;
dividing the drop sum to determine a relative drop attributable to each size range population of defects of the plurality; and
randomly selecting defects from each size range population of defects of the plurality.

6. (Previously Presented) The method of claim 5, further comprising:
randomly selecting defects from each size range population of defects of the plurality, a number selected from each size range population of defects of the plurality in proportion to the

relative contribution thereof, the randomly selected defects being weighted to represent defects having a greatest effect on yield losses.

7. (Previously Presented) The method of claim 6, further comprising:
reviewing the randomly selected defects and determining in-line action required to reduce wafer yield losses.

8. (Previously Presented) The method of claim 7, wherein reviewing the randomly selected defects includes visual inspection by a microscope.

9. (Previously Presented) The method of claim 7, wherein determining in-line action comprises determining if an individual semiconductor die of the semiconductor dice on the wafer is acceptable to proceed in a manufacturing process.

10. (Previously Presented) The method of claim 5, wherein determining defects on the semiconductor dice is performed by an automated surface inspection tool.

11. (Previously Presented) A method for semiconductor dice in wafer form comprising:
determining defects of the semiconductor dice;
classifying each of the defects by size and location;
assigning a weight to each of the defects representing an estimated effect of each defect on die yield;
determining an estimated die yield loss (DYL) for each of the semiconductor dice based on number and weight of the defects on each of the semiconductor dice;
summing all DYL of the semiconductor dice on the wafer to obtain a wafer yield loss (WYL);
subdividing the defects into a plurality of size range populations of defects;
determining a relative contribution of each size range population of defects of the plurality to the WYL;

randomly selecting defects from each size range population of defects of the plurality, a number selected from each size range population of defects of the plurality in proportion to the relative contribution thereof, the randomly selected defects weighted to represent defects having a greatest effect on yield losses; and

reviewing the randomly selected defects.

12. (Previously Presented) The method of claim 11, further comprising:

reviewing the randomly selected defects and determining in-line action required to reduce the WYL.

13. (Previously Presented) The method of claim 11, wherein determining defects and classifying each of the defects comprises classifying each of the defects into one of the plurality of size range populations of defects.

14. (Previously Presented) The method of claim 11, wherein determining the DYL comprises calculating an estimated die yield loss having lower and upper limits of zero and 1.0, respectively.

15. (Previously Presented) The method of claim 14, wherein the lower limit comprises a representation of no yield loss attributable to the defects and the upper limit comprises a representation of fatal yield loss attributable to the defects.

16. (Previously Presented) The method of claim 11, wherein subdividing the defects into the plurality of size range populations of defects comprises subdividing the defects into a plurality of 0 to 10 size range populations.

17. (Previously Presented) The method of claim 11, wherein determining the relative contribution of each size range population of defects of the plurality to the WYL comprises:

discarding data for each size range population of defects of the plurality and calculating, in turn, a drop in WYL for combined size range populations excepting the discarded data;

summing the calculated drop in WYL to obtain a drop sum; and

dividing the drop sum to determine a relative drop attributable to each size range population of defects of the plurality.

18. (Previously Presented) The method of claim 12, wherein determining in-line action required to reduce the WYL comprises determining if an individual semiconductor die of the semiconductor dice in wafer form is acceptable to proceed in a manufacturing process.

Please add the following new claims:

19. (New) A wafer comprising:

a plurality of semiconductor dice located on a wafer having a determined number of defects, each of the defects having a known size and location and having an effect of semiconductor die yield for the plurality of semiconductor dice of the wafer, an estimated semiconductor die yield loss (DYL) of the semiconductor die of the plurality of semiconductor dice of the wafer determined based on number and weight of the defect(s) on each semiconductor die of the plurality of semiconductor dice of the wafer, the estimated semiconductor die yield loss having lower and upper limits for summing all of the DYL of the plurality of semiconductor dice on the wafer for obtaining a wafer yield loss (WYL), the defects of the plurality of semiconductor dice of the wafer subdivided into a plurality of size range populations of defects for the plurality of semiconductor dice of the wafer, the relative contribution of each size range population of defects of the plurality of the semiconductor dice determining the wafer yield loss (WYL).

20. (New) The wafer of claim 19, wherein the DYL comprises calculating an estimated die yield loss having lower and upper limits of zero and 1.0, respectively.

21. (New) The wafer of claim 20, wherein the lower limit comprises a representation of no yield loss attributable to the defects and the upper limit comprises a representation of fatal yield loss attributable to the defects.

22. (New) The wafer of claim 19, wherein subdividing the defects into the plurality of size range populations of defects comprises subdividing the defects into a plurality of 0 to 10 size range populations.

23. (New) An in-process wafer comprising:

a plurality of semiconductor dice on a wafer having defects classified by size and location for classifying each of the defects into one of size range populations of defects in a computer file, each defect having a weight assigned thereto for representing an estimated effect of the defects on die yield for the semiconductor dice, an estimated die yield loss (DYL) for each semiconductor die of the semiconductor dice determined based on number and weight of the defects on each semiconductor die of the plurality of semiconductor dice, all DYL of the plurality of semiconductor dice on the wafer summed for obtaining a wafer yield loss (WYL), the defects of the plurality of semiconductor dice of the wafer subdivided into a plurality of size range populations of defects for determining a relative contribution of each size range population of defects of the plurality to the WYL, the relative contribution of each size range population of defects of the plurality of defects to the wafer yield loss is determined by discarding data for each size range population of defects of the plurality and calculating, in turn, a drop in the WYL for combined size range populations excepting the discarded data, summing the calculated WYL to obtain a drop sum, dividing the drop sum to determine a relative drop attributable to each size range population of defects of the plurality, and randomly selecting defects from each size range population of defects of the plurality.

24. (New) The in-process wafer of claim 23, further comprising:

randomly selecting defects from each size range population of defects of the plurality, a number selected from each size range population of defects of the plurality in proportion to the relative contribution thereof, the randomly selected defects being weighted to represent defects having a greatest effect on yield losses.

25. (New) The iin-process wafer of claim 24, further comprising:
reviewing the randomly selected defects and determining in-line action required to reduce wafer yield losses.

26. (New) The in-process wafer of claim 25, wherein reviewing the randomly selected defects includes visual inspection by a microscope.

27. (New) The in-process wafer of claim 25, wherein determining in-line action comprises determining if an individual semiconductor die of the semiconductor dice on the wafer is acceptable to proceed in a manufacturing process.

28. (New) The in-process wafer of claim 23, wherein determining defects on the semiconductor dice is performed by an automated surface inspection tool.

29. (New) A plurality of semiconductor dice in wafer form comprising:
a plurality of semiconductor dice having defects classified by size and location by assigning a weight to each of the defects representing an estimated effect of each defect on die yield, an estimated die yield loss (DYL) for each of the semiconductor dice determined based on number and weight of the defects on each of the semiconductor dice in wafer form for summing all DYL of the semiconductor dice on the wafer to obtain a wafer yield loss (WYL), the defects subdivided into a plurality of size range populations of defects, a relative contribution determined of each size range population of defects of the plurality to the WYL, defects randomly selected from each size range population of defects of the plurality, a number selected from each size range population of defects of the plurality in proportion to the relative contribution thereof, the randomly selected defects weighted to represent defects having a greatest effect on yield losses.

30. (New) The plurality of semiconductor dice in wafer form of claim 29, further comprising:

defects being randomly selected by reviewing the defects for determining in-line action required to reduce the WYL.

31. (New) The plurality of semiconductor dice in wafer form of claim 29, wherein each of the defects being classified into one of the plurality of size range populations of defects.

32. (New) The plurality of semiconductor dice in wafer form of claim 29, wherein the estimated die yield loss calculated having lower and upper limits of zero and 1.0, respectively.

33. (New) The plurality of semiconductor dice in wafer form of claim 32, wherein the lower limit comprises a representation of no yield loss attributable to the defects and the upper limit comprises a representation of fatal yield loss attributable to the defects.

34. (New) The plurality of semiconductor dice in wafer form of claim 29, wherein the defects are subdivided into a plurality of 0 to 10 size range populations.

35. (New) The plurality of semiconductor dice in wafer form of claim 29, wherein the relative contribution of each size range population of defects of the plurality to the WYL being determined by discarding data for each size range population of defects of the plurality and calculating, in turn, a drop in WYL for combined size range populations excepting the discarded data. summing the calculated drop in WYL to obtain a drop sum, and dividing the drop sum to determine a relative drop attributable to each size range population of defects of the plurality.

36. (New) The plurality of semiconductor dice in wafer form of claim 30, wherein the in-line action required to reduce the WYL determining if an individual semiconductor die of the semiconductor dice in wafer form is acceptable to proceed in a manufacturing process.